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(54) Title: COMPOSITIONS AND METHODS FOR IMPROVING LEARNING AND MEMORY

(57) Abstract

Disclosed are methods and an animal model for improving learning or memory in a subject, for treating learning and memory-related degenerative disease in a patient in need of such treatment, for identifying novel agents capable of regulating learning and memory, and for identifying genes involved in biological processes related to learning and memory. The methods and animal model system of the invention utilize the inventor's discovery that improvement of NMDA receptor function, in particular by increased expression of NR2B in the brain, enhances synaptic plasticity and improves learning and memory.